AP190HO **PATENT** 

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): William Chen Group Art Unit: Not Yet Assigned

Serial No.: Unknown Not Yet Assigned Examiner:

Filed: Herewith

Title: Video Codec System with Real-Time Complexity Adaptation and

Region-of-Interest Coding

#### **CERTIFICATION UNDER 37 CFR 1.10**

"Express Mail" Mailing Label Number: EV311302115US

I hereby certify that this Information Disclosure Statement, and the documents referred to as enclosed therein are being deposited with the United States Postal Service in an envelope as "Express Mail Post Office to Addressee" under 37 CFR 1.10 on the date indicated below and is addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450".

Dated: February 20, 2004

INFORMATION DISCLOSURE STATEMENT

Mail Stop Patent Application Commissioner for Patents P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. §1.56, and in accordance with the practice under 37 C.F.R. §1.97 and §1.98, the Examiner's attention is directed to the document(s) listed on the enclosed Form PTO-1449. A copy of each listed document is enclosed, except, in the case where this application is filed after June 30, 2003, copies of any U.S. patents and U.S. patent application publications are not enclosed.

This Information Disclosure Statement is being filed within three months of the U.S. filing date or before the mailing date of a first Office Action on the merits. No statement or fee is required (37 CFR §1.97(b)).

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### CONCLUSION

The Commissioner is hereby authorized to charge any additional fees, which may be required, or credit any over-payment to Deposit Account No.: 19-2746.

Respectfully submitted,

Michael T. Halik

Michael T. Gabrik

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Please address all correspondence to: Epson Research and Development, Inc. Intellectual Property Department 150 River Oaks Parkway, Suite 225 San Jose, CA 95134 Customer No. 20178 Phone: (408) 952-6000

Facsimile: (408) 952-6000 Facsimile: (408) 954-9058 Date: February 20, 2004 Form PTO-1449

# DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

# INFORMATION DISCLOSURE CITATION (USE SEVERAL SHEETS IF NECESSARY) PAGE 1 OF 2

SERIAL NO.	ATTY DOCKET NO.
Unknown	AP190HO
APPLICANT(S)	
Willian	n Chen
FILING DATE	GROUP

Not Yet Assigned

### U.S. PATENT DOCUMENTS

Herewith

E.I.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	AA	6,519,662	2/11/03	Clapp, et al.			
	ΑВ	2003/0020803	1/30/03	Yang, et al.			
	AC	2002/0199199	12/26/02	Rodriguez			
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	AE	6,490,319	12/3/02	Yang	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	AF	2002/0141498	10/3/02	Martins, et al.			
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-	АН	6,356,664	3/12/02	Dunn, et al.			
	AI	2002/0196848	12/26/02	Roman			
	AJ	2003/0103678	6/5/03	Hsuan			
	AK	2003/0095598	5/22/03	Lee, et al.			

## FOREIGN PATENT DOCUMENTS

E.I.		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
	AL						
	АМ						
	AN						
	AO						
-	AP						
	AQ						

### OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

	AR	"New Fast Algorithms for the Estimation of Block Motion Vectors," Bede Liu and Andre Zaccarin, IEEE Transactions on Circuits and Systems for Video Technology, Vol. 3, No. 2, pp. 148-157, April 1993				
	AS	"Computation Reduction for Motion Search in Low Rate Video Coders," J F. Yang, SC. Chang, and CY. Chen, IEEE Transactions on Circuits and Systems for Video Technology, Vol. 12, No. 10, pp. 948-951, October 2002.				
	AT	"Efficient Mode Selection for Block-Based Motion Compensated Video Coding," Thomas Wiegand, Michael Lightstone, T. George Campbell and Sanjit K. Mitra, Center for Information Processing Research, Department of Electrical and Computer Engineering University of California, Santa Barbara				
EXAMINER		R DATE CONSIDERED				

**EXAMINER**: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Form PTO-1449	DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	SERIAL NO. Unknown	ATTY DOCKET NO. AP190HO
	TION DISCLOSURE CITATION	APPLICANT(S) William Che	en
(USE SEV	ERAL SHEETS IF NECESSARY) PAGE 2 OF 2	FILING DATE  Herewith	GROUP Not Yet Assigned

### U.S. PATENT DOCUMENTS

	O.S. THEN DOCUMENTS						
E.I.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLAS	FILING DATE
	AA1						
	AB1						
	AC1						
	AD1						
	AE1	,					
	AF1						
	AG1						
	AH1						
	AI1						
	AJ1						
	AK1						

#### FOREIGN PATENT DOCUMENTS

E.I.	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
	AL1					
	AM1					
	AN1					

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AO1	"A New Three-Step Search Algorithm for Block Motion Estimation," R. Li, B. Zeng, and M. L. Liu, IEEE Transactions on Circuits and Systems for Video Technology, Vol. 4, No. 4, pp. 438-442, August 1994.
AP1	"A New Diamond Search Algorithm for Fast Block-Matching Motion Estimation," Shan Zhu and K.K. Ma, IEEE Transaction on Circuits and Systems for Video Technology, Vol. 9, No. 2, pp. 287-290, February 2000.
AQ1	"Rate Control in DCT Video Coding for Low-Delay Communications", Jordi Ribas-Corbera and S. Lei, IEEE Transactions on Circuits and Systems for Video Technology, Vol. 9, No. 1, pp. 172-185, February 1999.
AR1	"A Novel Four-Step Search Algorithm for Fast Block Motion Estimation", Lai-Man Po and Wing-Chung Ma, IEEE Transactions on Circuits and Systems for Video Technology, Vol. 6, No. 3, pp. 313-317, June 1996.
AS1	"JPEG 2000 and Region of Interest Coding", Andrew P. Bradley, Fred Stentiford, Digital Image Computing Techniques and Applications, Melbourne, Australia, pp. 1-6, January 2002
AT1	"Embedded Foveation Image Coding", IEEE Transactions on Image Processing, Vol. 10, No. 10, pp. 1397-1410, October 2001.
EXAMINER	DATE CONSIDERED